

Amendments to the Claims

1. (Previously presented) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, the pump comprising: a drive mechanism for moving said plunger along said barrel; and an occlusion detector responsive to occlusion to flow of medication from said syringe, said occlusion detector including a force sensor that directly senses the force exerted on the plunger in response to occlusion to flow of medication from said syringe, wherein the pump is operable in response to a detected occlusion to reverse the drive applied to move said plunger along said barrel sufficiently until the force detected by said force sensor falls by a predetermined amount.

2-3. (Canceled)

4. (Previously amended) A pump according to Claim 1, wherein the pump is arranged to reverse the drive until force detected by said force sensor is substantially 10% of the force at which an occlusion is detected.

5. (Previously presented) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, the pump comprising: a drive mechanism, said drive mechanism including a motor, a leadscrew driven by said motor and a plunger retainer movable along the leadscrew such as to move said plunger along said barrel; and a force sensor mounted with said plunger retainer to directly detect excess force on said plunger, wherein the pump is operable in response to an output from said force sensor indicative of an excess force to reverse said motor until the output of said force sensor indicates an absence of an excessive force on said plunger.

6. (Canceled)

7. (Previously presented) A method of controlling a syringe pump comprising the steps of: applying a force to drive a plunger along a barrel of a syringe to dispense medication; directly detecting force on said plunger; responding to a force on said plunger above a predetermined value by changing the direction of force applied to drive said plunger such that said directly detected force reduces below said predetermined value.

8. (Original) A method according to Claim 7, wherein force applied to drive said plunger is changed to reduce said detected force to substantially 10% of said predetermined value.

9. (Previously presented) A method according to Claim 7, wherein the pump generates an alarm when force on said plunger exceeds a predetermined value.

10. (Previously presented) A method according to Claim 7, wherein the pump only reapplies force to dispense medication when the pump is manually restarted after detection of an occlusion.

11. (New) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, comprising: a drive mechanism for moving said plunger along said barrel; an occlusion detector responsive to occlusion to flow of medication from said syringe, said occlusion detector including a force sensor that directly senses the force exerted on the plunger in response to occlusion to flow of medication from said syringe, a control unit and a memory, wherein said control unit compares the force sensed by said force sensor with contents of said memory to determine if the sensed force exceeds a F_{max} , and wherein if the sensed force does exceed F_{max} , said control unit sends out signals to cause said drive mechanism to stop and then reverse its drive movement until the force sensed by said force sensor is reduced to a predetermined amount above F_{max} .

12. (New) A syringe pump according to claim 11, wherein said drive mechanism is arranged to reverse its drive movement until the force detected by said force sensor is approximately 10% of F_{max} , said control unit stopping said drive mechanism at that time.